WHAT IS CLAIMED IS:

1.   An image-area separation apparatus, comprising:

a SIMD processor performing a SIMD process for performing an image-area separation process; and,

image-area separation means for performing an image-separation operation according to the SIMD process performed by the SIMD processor.

2.   The image-area separation apparatus as defined in Claim 1, wherein the image-separation means is configured to image-separate the image data into a character portion and a figure portion.

3.   The image-area separation apparatus as defined in Claim 2, further comprising:

a plurality of characteristic test means for performing a plurality of characteristic tests to determine whether the image data have specific characteristics; and,

comprehensive test means for determining a comprehensive test result according to the plurality of the characteristic tests means performed by the plurality of test means.

4.   The image-area separation apparatus as defined in Claim 3, wherein said plurality of the characteristic means includes characteristic test means configured to determine whether the image data include edge data.

5.   The image-area separation apparatus as defined in Claim 3, wherein said plurality of the characteristic means includes characteristic test

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means configured to determine whether the image data include dotted image data.

6.   The image-area separation apparatus as defined in Claim 3, wherein said plurality of the characteristic means includes characteristic test means configured to determine whether the image data include line screen image data.

7.   The image-area separation apparatus as defined in Claim 3, wherein the plurality of characteristic test means include:

edge test means for determining whether the image data include the edge data, and;

dotted image test means for determining whether the image data include the dotted image data,

wherein the comprehensive test means

determines that the image data include the character portion when

the edge test means determines the image data include at least one edge component and when the dotted image test means determines that the image data include no dotted image component, and

determines that the image data include the figure portion when

at least one of two events occurs in which the edge test means determines that the image data include no edge component and in which the dotted image test means

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determines that the image data include one of at least dotted components.

8.   The image-area separation apparatus as defined in Claim 3, comprising:

the edge test means for detecting whether the image data include the edge data;

the dotted image test means for detecting whether the image data include the dotted image data; and

a line screen test means for detecting whether the image data include line screen image data;

wherein the comprehensive test means determines that the image data include the character portion when

the edge test means determines the image data include at least one edge component;

the dotted image test means determines that the image data include no dotted image component; and

the line screen test means determines that the image data include no line screen; and

wherein the comprehensive test means determines that the image data include the figure portion when at least one of the following three events occur:

the edge test means determines that the image data include no edge component;

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the dotted image test means determines that the image data include one of at least dotted components; and

the line screen test means determines that the image data include at least one of line screen components.

9. An image-area separation apparatus as defined in Claim 1, further comprising:

a data converter for converting data using the data as an address stored in a register of a register file of said SIMD processor;

a data table converter connected to the SIMD processor for converting data of a data table using, as an address, data of a register provided to the SIMD processor;

wherein said image-area separation apparatus performs the image-area separation operation by causing the SIMD processor to perform the SIMD process and the data table converter to perform a sequential operation.

10. The image-area separation apparatus as defined in Claim 9, wherein the image-area separation means is configured to require intermediate data in the SIMD process and to perform the sequential operation for the intermediate data.

11. An image-area separation apparatus which processes the read image of the original image data, comprising:

a SIMD processor performing a SIMD process for performing an image-area separation process; and

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image-area separation means for performing an image-separation operation according to the SIMD process performed by the SIMD processor.

12.   An image forming apparatus, comprising:

an image reading apparatus to read an image of an original image data;

an image-area separation apparatus which processes the read image of the original image data, said image-area separation apparatus, comprising:

a SIMD processor performing a SIMD process for performing an image-area separation process; and

image-area separation means for performing an image-separation operation according to the SIMD process performed by the SIMD processor;

an image-processing means for switching over contents of the image data in accordance with the result of the image-separation operation performed by the image-separation apparatus; and

image forming means for forming an image onto a recording sheet in accordance with the image data read by the image reading apparatus.

13.   A computer-readable program for an image-area separation embodied on an information storage medium,

said computer-readable program, comprising processing routines executed by a SIMD processor, comprising the step of:

causing the SIMD processor to perform the image-area separation for image-separating the image data.

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14.   The computer-readable program for the image area separation as defined in Claim 13, wherein the image-area separation operation comprises separating the image data into a character portion and a figure portion.

15.   The computer-readable program for the image area separation as defined in Claim 14, comprising:

a processing routine to cause said processor to execute

a plurality of characteristic test means for performing a plurality of characteristic tests to determine whether the image data have specific characteristics; and

a comprehensive test means for determining a comprehensive test result according to the plurality of the characteristic tests means performed by the plurality of test means.

16.   The computer-readable program as defined in Claim 15, wherein one of a plurality of the characteristic test processes is an edge test process configured to determine that the image data include an edge component.

17.   The computer-readable program as defined in Claim 15, wherein one of a plurality of the characteristic test processes is a dot image test process configured to determine that the image data include a dotted image component.

18.   The computer-readable program as defined in Claim 15, wherein one of a plurality of the characteristic test processes is a line screen test process configured to determine that the image data include a line screen components of the image data.

19.   The computer-readable program as defined in Claim 13, wherein the image-area separation process causes the SIMD-typed processor to execute said SIMD process and to perform the image-area separation by allowing a table converter which performs a table conversion in which register data of the register file of the SIMD-typed processor are an address to execute a sequential process.

20.   The computer-readable program as defined in Claim 19, wherein the image-area separation is configured to calculate intermediate data and to perform the sequential process in accordance with the intermediate data.

21.   A computer-readable medium having stored thereon computer-executable instructions which include the image-area separation, comprising:

said computer-readable program, comprising processing routines executed by a SIMD processor, comprising the step of:

causing the SIMD processor to perform the image-area separation for image-separating the image data.

22.   The computer-readable medium as defined in Claim 21, wherein the image-area separation operation image-separates the image data into a character portion and a figure portion.

23.   The computer-readable medium as defined in Claim 22, comprising:

a plurality of characteristic test means for performing a plurality of characteristic tests to determine whether the image data have specific characteristics; and,

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comprehensive test means for determining a comprehensive test result according to the plurality of the characteristic tests means performed by the plurality of test means.

24. The computer-readable medium as defined in Claim 23, wherein one of a plurality of the characteristic test processes is an edge test process configured to determine that the image data include an edge component.

25. The computer-readable medium as defined in Claim 23, wherein one of a plurality of the characteristic test processes is a dot image test process configured to determine that the image data include a dotted image component.

26. The computer-readable medium as defined in Claim 23, wherein one of a plurality of the characteristic test processes is a line screen test process configured to determine that the image data include a line screen components of the image data.

27. The computer-readable medium as defined in Claim 13, wherein the image-area separation process causes the SIMD-typed processor to execute said SIMD process and to perform the image-area separation by allowing a table converter which performs a table conversion in which register data of the register file of the SIMD-typed processor are an address to execute a sequential process.

28. The computer-readable medium as defined in of Claim 19, wherein the image-area separation is configured to calculate intermediate data and to perform the sequential process in accordance with the intermediate data.